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(54) **METHOD AND APPARATUS FOR FORMING DATA SECTOR SUITABLE FOR HIGH DENSITY HARD DISK DRIVE**

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(52) **U.S. Cl.** **360/48**; 360/51
(58) **Field of Search** 360/48, 51, 77.08, 360/53, 46

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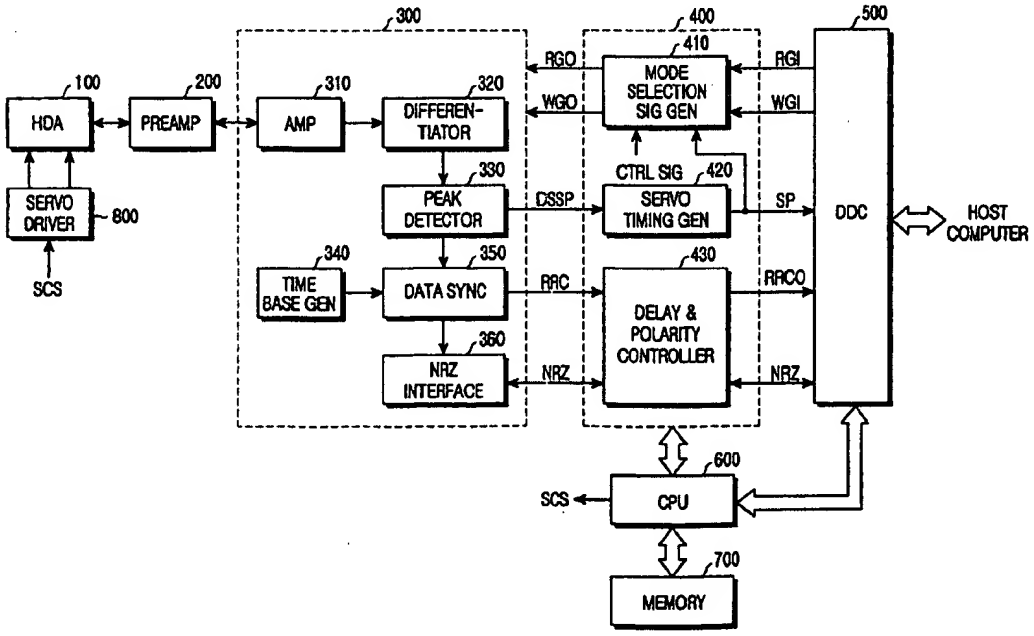
(57) **ABSTRACT**

A data sector format suitable for a high density hard disk drive includes an ID region for writing ID information for the data sector, and a data region for writing data transferred from an external device. The ID region is formed within the data region and a synchronization signal for reading the ID information is written into the data region. The data sector includes a data sync region for writing a synchronization signal for reading information written on the data sector, the ID region for writing ID information for the data sector, a PAD region for separating the ID region and the data region, a data address mark region for indicating a validity of data written on the data sector, the data region for writing the data transferred from the external device, and an error correction code region for writing an error correction code to automatically correct an error upon occurrence of a defect when data is written on the data region.

25 Claims, 5 Drawing Sheets